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07/17/2003

Jean-Claude Dispensa

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EXAMINER

KEEHN, RICHARD G

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/621,669	Applicant(s) DISPENSA ET AL.	
	Examiner Richard G. Keehn	Art Unit 2456	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-7 and 9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1-3, 5-7 and 9 have been examined and are pending.

Claims 4, 8 and 10-11 have been cancelled by the Applicant.

This Office Action is FINAL.

Response to Arguments

1. Applicant's arguments, see Page 5, filed 6/25/2008, with respect to 35 U.S.C. 101 have been fully considered and are persuasive. The rejection of Claim 11 has been withdrawn.
2. Applicant's arguments with respect to claim rejections under 35 U.S.C. 102 and 103 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1 rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,744,739 B2 (Martin), and further in view of US 7,065,587 B2 (Huitema et al.) and US 6,915,457 B1 (Miller).

As to Claim 1, Martin discloses an invention substantially as claimed, including a method for splitting and sharing routing information among several routers, comprising:

providing a group of routers (Martin – Figure 1 items 58, 59, 70 recite border routers);

each of the routers acting as a single border router in an Internet protocol network, each router comprising a routing table (Martin – Figures 1 & 5 recite boarder routers in an IP network, and Column 2, lines 21-24 recite “route summarization where an internetwork is divided into logical areas, with each area's border router advertising only a single summary route to other areas in order to reduce routing table size”);

splitting the first router's routing table into a plurality of subnetworks (Martin – Figures 1 & 5 recite boarder routers in an IP network, and Column 2, lines 21-24 recite “route summarization where an internetwork is divided into logical areas, with each area's border router advertising only a single summary route to other areas in order to reduce routing table size”);

intended for a one of the plurality of subnetworks (Martin – Figures 1 & 5 recite boarder routers in an IP network, and Column 2, lines 21-24 recite “route summarization where an internetwork is divided into logical areas, with each area's border router advertising only a single summary route to other areas in order to reduce routing table size”);

by informing each of the other routers that it is ready to receive the IP traffic from each of the other routers directed to the one subnetwork (Martin – Figures 1 & 5 recite boarder routers in an IP network, and Column 2, lines 21-24 recite “route summarization

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where an internetwork is divided into logical areas, with each area's border router advertising only a single summary route to other areas in order to reduce routing table size”);

in response to the informing, each of the other routers selecting and removing from their own routing table a route related to the one subnetwork and replacing the removed route by a single route pointing to the informing second router (Martin – Figures 1 & 5 recite boarder routers in an IP network, and Column 2, lines 21-24 recite “route summarization where an internetwork is divided into logical areas, with each area's border router advertising only a single summary route to other areas in order to reduce routing table size”).

Martin does not disclose, but Huitema et al. disclose an invention substantially as claimed, including

comparing the size of the routing tables with a predefined threshold (Huitema et al. – Column 3, lines 10-13 recite determining whether a routing table has reached its limit); and

in response to the size of a routing table of a first of a group of routers exceeding the predefined threshold (Huitema et al. – Column 3, lines 10-13 recite determining whether a routing table has reached its limit and taking some action when the limit is reached):

Martin does not explicitly disclose, but D’Annunzio et al. disclose an invention substantially as claimed, including

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a second of the routers taking responsibility for routing IP traffic (Miller – Column 8, lines 5-20 recite the example of the B router interface failure, wherein B notifies A to update its router table)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine comparing the size of the routing tables with a predefined threshold; and in response to the size of a routing table of a first of a group of routers exceeding the predefined threshold taught by Huitema et al., with each of the routers acting as a single border router in an Internet protocol network, each router comprising a routing table taught by Martin.

One of ordinary skill in the art at the time the invention was made would have been motivated to adhere to the real life practical limit of the routing table (Huitema et al. – Column 3, lines 10-12).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the IP routing methods taught by Miller., with splitting the first router's routing table into a plurality of subnetworks taught by Martin.

One of ordinary skill in the art at the time the invention was made would have been motivated to provide a secondary backup means in case a first router no longer performs its function with respect to routes (Miller, Column 8, lines 5-20).

As to Claim 2, the combination of Martin, Huitema et al. and Miller discloses an invention substantially as claimed, including the method according to the claim 1, comprising the further step of

forwarding IP traffic corresponding to a non-selected route, to a router of the group of routers associated with said non-selected route within the routing table (Miller – Column 6, line 56 to Column 7, line 5 recites the forwarding of IP traffic by specifying the best route for said traffic to travel. The API uses that information to route the traffic).

The motivation and obviousness arguments are the same as in Claim 1.

As to Claim 3, the combination of Martin, Huitema et al. and Miller discloses an invention substantially as claimed, including the method according to claim 1, further comprising

receiving from at least one of the other routers the IP traffic corresponding to the selected routes (Miller – Column 6, lines 45-47 recite the receipt from outside routers the IP traffic); and

routing said IP received traffic (Miller – Column 6, line 56 to Column 7, line 5 recites the forwarding of IP traffic by specifying the best route for said traffic to travel. The API uses that information to route the traffic).

The motivation and obviousness arguments are the same as in Claim 1.

As to Claim 6, the combination of Martin, Huitema et al. and Miller discloses an invention substantially as claimed, including the method according to claim 1,

comprising the preliminary steps of establishing sessions with other routers of the group (Miller – Column 6, lines 56-58 recite the acceptance of routing information from outside routers, which means that the communication session had commenced); and

creating a list of routers of the group (Miller – Column 6, lines 56-58 recite the acceptance of routing information from outside routers and populating the final control plane routing table).

The motivation and obviousness arguments are the same as in Claim 1.

As to Claim 7, the combination of Martin, Huitema et al. and Miller discloses an invention substantially as claimed, including the method according to claim 1,

comprising the preliminary step of establishing sessions with other border routers (Miller – Column 6, lines 56-58 recite the acceptance of routing information from outside routers, which means that the communication session had commenced; Column 3, lines 59-66 recite the communication with other networks).

The motivation and obviousness arguments are the same as in Claim 1.

As to Claim 9, the combination of Martin, Huitema et al. and Miller discloses an invention substantially as claimed, including the method according to claim 1,

wherein routers within the group exchange routing information using Border Gateway Protocol (Miller – Column 7, lines 45-47 recite BGP).

The motivation and obviousness arguments are the same as in Claim 1.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Martin, Huitema et al. and Miller as applied to claim 1 above, and further in view of US 2002/0118682 A1 (Choe).

As to Claim 5, the combination of Martin, Huitema et al. and Miller discloses an invention substantially as claimed, including the method according to claim 1,

The combination of Martin, Huitema et al. and Miller does not disclose, but Choe discloses an invention substantially as claimed, including wherein the step of selecting routes in the routing table comprises the further step of selecting contiguous IP addresses within a given address range (Choe – Page 3, ¶ [0023] recites the selection of adjacent IP addresses within a prefix range).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine selecting contiguous IP addresses within a given address range taught by Choe, with the step of selecting routes in the routing table taught by the combination of Martin, Huitema et al. and Miller.

One of ordinary skill in the art at the time the invention was made would have been motivated to integrate routing table address selection with hash tables to facilitate high speed lookup (Choe – Page 3, ¶ [0019]).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard G. Keehn whose telephone number is 571-270-5007. The examiner can normally be reached on Monday through Thursday, 9:00am - 8:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RGK

/Bunjob Jaroenchonwanit/
Supervisory Patent Examiner, Art Unit 2456